

P/N 99000191 Rev A

Revised 11-25-87

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80810-10 CARTRIDGE STREAMER HARDWARE MANUAL SUPPLEMENT  
(P/N99000191)

This document is a supplement to the 80810-10 Cartridge Streamer  
Tape Subsystem Hardware Maintenance Manual (P/N 60467480).

2-22-88			
DJ Briggs			

930-005-462

Replace page 2-5 with the following.

#### OPERATING CONSIDERATIONS AND PRECAUTIONS

##### Head Cleaning

The operator (not the Service Engineer) is required to clean the heads. Normally the primary source of head contamination is the accumulation of oxide from the tape. See 80810-10 Cartridge Streamer Subsystem Reference Manual (60467470) for details on head cleaning and other operating considerations and precautions.

Add Page 6-8A

#### Diagnostic Enhancements

A new enhanced diagnostic has been released which provides for rapid detection/isolation of go no-go testing in a shortened linked series. The part number for the enhanced diagnostic on 8 inch media is 99000172. The part number for the enhanced diagnostic on 5 1/4 inch media is 99000175.

The enhanced Diagnostics give the user the option of testing either a 80810-10 (60MB) or 80820-10 (260MB) Tape Subsystem. The Diagnostics are organized as a group of linked tests (5900-5903 and 5913) for routine checkout. An unlinked performance test (5904) is provided for isolation of marginal operation problems. This test includes diagnosis of marginal data operation and/or mechanical problems (EOT, head stepping). Because of the extensive testing in test 5904, a 150 foot tape is recommended to reduce the test time. Also a utility (5910) is provided for basic tape operations such as retention, Read File Mark, etc.

Because of the enhancements made, Table 6-2 Tape Storage Subsystems Diagnostics and the SAMs on pages 6-11 thru 6-26 no longer apply. As well, because of the dual drive configuration, the 80820-10 test options include: test drive 1 only, test drive 2 only, and test both drives. Select test drive 1 only for the 80810-10 Streamer.

Note: The diagnostics will run thru test 5902 without the I/O cable on the Attachment card or the power off on the tape drive. The first failure without the tape drive available will be at test 5903 step 7.

5900 Channel Interface Tests.

5901 DCB and internal Attachment Card Tests.

5902 Read/Write Attachment Card Ram Tests.

5903 Read/Write/Compare Drive Data Tests (Drive 1 only).

5913 Read/Write/Compare Drive Data Tests (Drive 2 only).

Manual Tests.

5904 Data Reliability/Head Step/EOT Tests (manual test).

5910 Drive Utilities (manual tests).

The Drive utility options include: Read Cycle Steal Status, Rewind, Retention, Read File Mark, and Erase.

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80810-10 CARTRIDGE STREAMER REFERENCE MANUAL SUPPLEMENT  
(P/N99000192)

This document is a supplement to the 80810-10 Cartridge Tape  
Streamer Subsystem Reference Manual (P/N 60467470).

2-22-88 <i>DJ Buggs</i>			
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930-005-463

Page 2-5 Replace with the following (2-5 and 2-5A).

## OPERATING CONSIDERATIONS AND PRECAUTIONS

### Handling/Operating Precautions

1. Observe the environmental requirements in Table 1-3 Tape Cartridge Drive Specifications for optimum performance.
2. Store tape cartridges in a cabinet away from electric motors, transformers, or other similar devices.
3. Allow sufficient time for tape cartridges removed from storage to reach thermal equilibrium with the Cartridge Tape Drive Subsystem before inserting or using them.
4. Do not expose the tape cartridge to dirt or other contaminants or touch the tape by opening the cartridge door.

### Head Cleaning

The operator (not the Service Engineer) is required to clean the heads. Normally the primary source of head contamination is the accumulation of oxide from the tape. New tapes during the first few passes of operation tend to burnish the media resulting in some loose oxide which may cause some accumulation in the head gap. Note the units are by design mounted such that the oxide will fall down and out of the cartridge minimizing the possibility of head contamination.

Under normal usage of half an hour a day, the heads should be cleaned every 100 hours or about six months. The introduction of 10 to 20 new cartridges a year should not require additional head cleaning if the routine maintenance is being performed. However, if the unit is indicating more retries than usual on a number of tapes, the heads should be cleaned to eliminate contamination as a potential cause.

At present the only recommended operator cleaning of heads should be with a QIC Drive Cleaning Kit from PerfectData Corporation (Simi Valley, CA.) using a fluid approved for use on magnetic tape. The kit includes: a QIC Drive Cleaner, Cleaning Fluid, Spare Pads, and instructions.

Fluid must be applied the full length of the pad in order to ensure cleaning the entire head (the head media cleaning bars are at the end of the heads). Alcohol or other unapproved fluids may result in damage to both the media and the plastic/rubber portions of the cartridge. Also, the pads must be replaced after five uses; additional pads are within the kit. Replacement kits for the fluid and pads are available as well.

In emergencies Q tips or other cotton swabs may be used with the proper cleaning fluid. However care must be taken to avoid leaving fiber residues on the head.

To clean the heads:

1. Obtain the proper head cleaning supplies.
2. Turn power "Off" at the Tape Drive Subsystem (no motor or capstan motion is required).
3. Follow the instructions included with the QIC Drive Cleaning Kit to install the cleaning pad and apply the solution. Insert the handle into the end of the cleaning cartridge.
4. Insert the QIC Drive Cleaner into the Tape Drive with the pad facing the read/write heads (the side of the drive with the LED on it).
5. Rotate the handle 15 to 20 times.
6. Remove the QIC Drive Cleaner using the same procedure as for a standard data cartridge.
7. Turn power back "On" at the Tape Drive Subsystem.

#### Service Life

Under ideal use, the cartridge should provide satisfactory performance for 5000 passes (pass=an operation which moves the tape the length of one track). For a Save operation along with the attendant erase and rewind operations, a total of approximately 12 passes would be required. Thus a cartridge potentially could be used for approximately 500 Saves. In practice, the service life may be reduced to the 100 Saves due to environmental or handling stresses.

To determine the serviceability of the cartridges, the number of retries or marginal blocks should be monitored. If the number of retries during a Save or marginal blocks during a Certify exceed 1 per megabyte of data (50 per 600 foot cartridge), the cartridge should be removed from service. The cartridge may successfully operate above this level, but its reliability has been significantly reduced.